What is claimed is:

1. A method of retrieving channel characteristics for a discrete multi-tone communication channel comprising the steps of:

at initialization, determining and storing channel frequency response and noise measurements at a CO end of the channel;

at show time, determining and storing a signal-to-noise measurement at said first end;

at a CPE end of the channel, retrieving at least one of the stored measurements; and

receiving data at the CPE end at a rate in dependence upon the one or more of the retrieved measurement.

2. A method as claimed in claim 1 wherein the channel is symmetrical.

3. A method as claimed in claim 1 wherein the channel is asymmetrical.

4. A method as claimed in claim 1 wherein the channel is overlapping.

5. A method as claimed in claim 1 wherein the channel is non-overlapping.

6. A method as claimed in claim 1 wherein the channel is ADSL.

7. A method as claimed in claim 1 wherein the channel noise is N(f).

8. A method as claimed in claim 1 wherein the channel frequency response is H(f).

9. A method as claimed in claim 1 wherein the signal-to-noise measurement is SNR(f).

10. An apparatus for retrieving channel characteristics for a discrete multi-tone communication channel comprising:

a circuit for at initialization, determining and storing channel frequency response and noise measurements at a CO end of the channel;

a circuit for at show time, determining and storing a signal-to-noise measurement;

a circuit for at a CPE end of the channel, retrieving at least one of the stored measurements; and

a circuit for transmitting to the CPE end at a rate in dependence upon the retrieved measurement.

11. An apparatus as claimed in claim 10 wherein the channel is symmetrical.

12. An apparatus as claimed in claim 10 wherein the channel is asymmetrical.

13. An apparatus as claimed in claim 10 wherein the channel is overlapping.

14. An apparatus as claimed in claim 10 wherein the channel is non-overlapping.

15. An apparatus as claimed in claim 10 wherein the channel is ADSL.

16. An apparatus as claimed in claim 10 wherein the channel noise is N(f).

17. An apparatus as claimed in claim 10 wherein the channel frequency response is H(f).

18. An apparatus as claimed in claim 10 wherein the signal-to-noise measurement is SNR(f).

19. A method of retrieving channel characteristics for a discrete multi-tone communication channel comprising the steps of:

at a CO end of the channel, retrieving from a CPE end of the channel, at least one of the channel frequency response, noise measurement or signal-to-noise measurement that were previously determined and stored at said CPE end; and,

at the CO end, receiving data from said CPE end, at a rate in dependence upon one or more of the retrieved measurements.

20. A method as claimed in claim 19 wherein the retrieved channel frequency response was determined and stored at said CPE end during the initialization of said CPE end.

21. A method as claimed in claim 19 wherein the retrieved noise measurement was determined and stored at said CPE end during the initialization of said CPE end.

22. A method as claimed in claim 19 wherein the retrieved signal-to-noise measurement was determined and stored at said CPE end during show time at said CPE end.

23. A method of retrieving channel characteristics for a discrete multi-tone communication channel comprising the steps of:

at a CPE end of the channel, transmitting to a CO end of the channel, at least one of the channel frequency response, noise measurement or signal-to-noise measurement that were previously determined and stored at said CPE end; and,

at the CPE end, sending data from to said CO end at a rate in dependence upon one or more of the transmitted measurements.

24. A method as claimed in claim 23 wherein the channel frequency response is determined and stored at said CPE end during the initialization of said CPE end.

25. A method as claimed in claim 19 wherein the noise measurement is determined and stored at said CPE end during the initialization of said CPE end.

26. A method as claimed in claim 19 wherein the signal-to-noise measurement is determined and stored at said CPE end during show time at said CPE end.

27. A method comprising the steps of:

retrieving the in-band downstream or upstream ADSL channel frequency response H(f), the noise N(f), as measured at initialization and the signal to noise ratio SNR(f) measured at show time on a per bin basis.

28. An apparatus comprising:

a register for storing measurements of in-band downstream or upstream ADSL channel frequency response H(f), the noise N(f), measured at initialization and the signal to noise ratio SNR(f) measured at show time, respectively on a per bin basis; and

a circuit for retrieving measurements of in-band downstream or upstream ADSL channel frequency response H(f), the noise N(f) and the signal to noise ratio SNR(f) during show time.

29. A method comprising the steps of:

retrieving the in-band downstream or upstream discrete multi-tone based VDSL channel frequency response H(f), the noise N(f), as measured at initialization and the signal to noise ratio SNR(f) measured at show time on a per bin basis.

30. An apparatus comprising:

a register for storing measurements of in-band downstream or upstream discrete multi-tone based VDSL channel frequency response H(f), the noise N(f), measured at initialization and the signal to noise ratio SNR(f) measured at show time, respectively on a per bin basis; and

a circuit for retrieving measurements of in-band downstream or upstream discrete multi-tone based VDSL channel frequency response H(f), the noise N(f) and the signal to noise ratio SNR(f) during show time.